

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. – 13. (Canceled)

14. (Currently amended) A method of translocating a transporter peptide into a pancreatic B-cell, comprising contacting a pancreatic B-cell with a transporter peptide for a time and under conditions sufficient to allow a transporter peptide to translocate across a membrane of the B-cell, wherein the transporter peptide comprises the amino acid sequence of SEQ ID NO:1  ~~$X_mRX_n$~~  and wherein:

~~a) X is a non-basic amino acid;~~

~~b) m is an integer from zero to fourteen;~~

~~c) n is an integer, independent of m, between zero and fourteen; and~~

~~d) o is an integer, independent of m and n, between zero and five.~~

15. – 44. (Canceled)

45. (Previously presented) The method of claim 14, wherein the transporter peptide is a retro-inverso peptide.

46. (Previously presented) The method of claim 14, wherein the transporter peptide contains one or more modified residues.

47. (Previously presented) The method of claim 14, wherein the transporter peptide comprises an amino acid sequence having a length selected from the group consisting of less than fifty amino acids long, less than twenty-five amino acids long and less than fifteen amino acids long.

48. (Previously presented) The method of claim 14, wherein the cells are contacted *in vivo*.

49. (Previously presented) The method of claim 14, wherein the cells are contacted with a pharmaceutically acceptable salt of the transporter peptide.
50. (Currently amended) ~~A method of detecting translocation of a transporter peptide across a membrane of a pancreatic B-cell,~~ The method of claim 14, further comprising the step of ~~of~~ ~~[[:]~~
- ~~a) contacting a population of B-cells with a transporter peptide; wherein~~
- ~~the transporter peptide comprises the amino acid sequence  $X_mRX_oRX_n$  and~~
- ~~wherein~~
- ~~x is a non-basic amino acid;~~
- ~~m is an integer from zero to fourteen;~~
- ~~n is an integer, independent of m, between zero and fourteen;~~
- ~~o is an integer, independent of m and n, between zero and five;~~
- ~~b) incubating the B-cells and transporter peptide for a time and under conditions~~
- ~~sufficient to enable translocation into the cells; and~~
- ~~detecting the presence of said transporter peptide inside the B-cell after contacting the~~
- ~~pancreatic B-cell with a transporter peptide.~~
51. (Previously presented) The method of claim 50, wherein the transporter peptide is detectably labeled.
52. (Currently amended) The method of claim 50, wherein the presence of the transporter peptide~~[[s]]~~ is detected by incubating said ~~population of B-cell~~~~[[s]]~~ with detectably labeled antibodies to the transporter peptide~~[[s]]~~.
53. (Currently amended) The method of claim 50, wherein detecting the presence of the transporter peptide comprises ~~translocation is detected by~~ observing a biological response

Applicant: Bonny  
U.S.S.N. 09/977,831

in a host containing said ~~population of~~ B-cell[[s]].

54. (Previously presented) The method of claim 53, wherein the host is a human being.